

Comment on the article *Problems in the Nomenclature of Higher Taxonomic Categories* by Ya.I. Starobogatov
(See BZN 48: 6–18)

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I consider the proposals by Starobogatov (1991) to be important and timely, and I agree with them with a single though important reservation. I feel a mistake the proposition (BZN 48: 13) to allow formal availability of a descriptive (non-typified) name with its author and date, for this will prevent its replacement by the typified name. Indeed, under this proposal the typified name will be a junior synonym of the descriptive name. Until the names of higher taxa are entirely regulated by the Code the current practice is better, that is the use of descriptive names despite their having no formal availability.

Additionally, I think that hemihomonymy (see pp. 8–9) would be more securely avoided if suprageneric names ended in *-i* and *-ae*, not *-es*.

Comments on the proposed conservation in their accepted usage of the nominal taxa *Bucephalus* Baer, 1827 and *B. polymorphus* Baer, 1827 (Trematoda)
(Case 2251; see BZN 36: 30–36, 49: 6–11)

Editorial Note: A detailed comment opposing Dr Baturo's application was received from Dr Srivastava (Zoological Survey of India) on 5 January 1981. Extensive correspondence took place between Dr Srivastava, Mr R.V. Melville (then Secretary of the Commission) and Dr Baturo between January 1981 and April 1985. A condensed version of Dr Srivastava's comments is now published for the first time. Comments in support of Dr Baturo's application from Dr D.I. Gibson (*Head of the Parasitic Worms Division, The Natural History Museum, London*), from Dr O.N. Pugachev (*Head of the Parasitic Worms Department, Zoological Institute, Academy of Sciences, St Petersburg*) and from Professor J.C. Pearson (*Professor of Helminthology, Department of Parasitology, University of Queensland*) are also published. Dr Gibson's comment takes recent usage into account.

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This comment opposes Dr Baturo's application to conserve the generic name *Bucephalus* Baer, 1827, with type species *B. polymorphus* Baer, 1827 in place of *Gasterostomum* Siebold, 1848, with type species *G. fimbriatum* Siebold, 1848, and to use *Rhipidocotyle* Diesing, 1858, with type species *R. galeatum* (Rudolphi, 1819) in place of *Bucephalus* Baer, 1827, with type species *B. polymorphus* Baer, 1827. The history of the confused classification of bucephalid trematodes shows that application of the normal rules of zoological nomenclature is more desirable than invoking the plenary powers of the Commission to stabilise the systematics of this group.

Stunkard (1976, p. 309), while discussing the systematics of these trematodes, remarked: 'The taxonomy of the bucephalid trematodes is complicated because of unsupported and unwarranted presumptions between larval and adult stages'. He further stated (p. 313): 'The status of *Bucephalus polymorphus* von Baer, 1827 and *Gasterostomum fimbriatum* von Siebold, 1848, long regarded as specifically identical and the only bucephalid species in freshwater hosts in Europe, is equivocal. *Bucephalus polymorphus* is the name of a cercaria whose adult stage is yet to be disclosed and the larval stages of *G. fimbriatum* are unknown'.

Baturo (1977), while working on freshwater fish parasites of Goslawickie and Slesinske Lakes (Central Poland), collected bucephalid sporocysts and cercariae from the bivalve *Dreissena polymorpha*, completed their development and found that they developed into adults resembling *Gasterostomum fimbriatum* Siebold, 1848 which, on account of misconceptions by earlier workers, is known as *Bucephalus polymorphus* Baer, 1827. These larval stages, though, did not correspond to the cercaria described by Baer (1827) under the name *Bucephalus polymorphus*, yet Baturo (1977) put them under this name. She found sporocysts and cercariae of another bucephalid parasitising the bivalve *Unio pictorum* in Lake Slesinske, which were identical with those described by Baer (1827) as *Bucephalus polymorphus* from *Unio pictorum* and *Anodonta mutabilis* in European freshwaters. She completed the life history of these larval stages and found that they developed into adult *Rhipidocotyle illensis* (Ziegler, 1883), a fact already suspected by Ziegler (1883). Baturo wrongly named this cercaria as *Rhipidocotyle illensis* instead of *Bucephalus polymorphus*, thus further complicating the confused status of bucephalid worms. In following the rules of zoological nomenclature, Baturo (1977) should have adopted the genus *Gasterostomum* Siebold, 1848, with its type species *fimbriatum* and relegated the genus *Rhipidocotyle* Diesing, 1858 and the species *Rhipidocotyle illensis* (Ziegler, 1883) (= *Distoma campanula* Dujardin, 1845) to the synonymy of the genus *Bucephalus* Baer, 1827 and the species *B. polymorphus* Baer, 1827. Instead of following this normal procedure she appealed to the International Commission on Zoological Nomenclature, in the name of stability, to disregard the 'forgotten' name *Gasterostomum* with its type species *fimbriatum*.

The generic name *Bucephalus* with its type species *polymorphus* was based on the larval form, whereas the genus *Gasterostomum* with its type species *fimbriatum* was described on adult worms. Synonymy was based on the erroneous assumption that the larva *Bucephalus polymorphus* develops into the adult *Gasterostomum fimbriatum*. Under Article 23f(ii) of the [1985] Code the Principle of Priority applies 'even if two or more generations, forms, stages or sexes of a species are named as different taxa'.

That the generic name *Gasterostomum* Siebold is not a forgotten name is evident from the fact that the question of its validity has been repeatedly raised.

A parallel case occurs in this family where the cercaria *Bucephalopsis haimeanus* Lacaze-Duthiers, 1854 was supposed to have developed into the adult *Bucephalopsis gracilescens* Rudolphi, 1819, but the life history was never proved. In this case Hopkins (1954) restricted the generic name *Bucephalopsis* to the cercaria *haimeanus* and proposed a new generic name *Bucephaloides* for the adult *gracilescens*. Srivastava & Chauhan (1973), while agreeing with the restriction of the generic name *Bucephalopsis* to the cercaria *haimeanus*, refuted the proposal of a new name *Bucephaloides* for the adult species since a senior synonym *Proisorhynchoides* Dollfus, 1929, with type species *ovatus* by original designation, based on the adult characters, was available. They

resurrected the genus *Proisorhynchoides* Dollfus, 1929, for all the adult species included under the genus *Bucephalopsis*, relegating *Bucephaloides* Hopkins, 1954, to its synonymy. This contention has been accepted by Stunkard (1974).

In the case of parasites where larval stages are different from adults and both are described as separate species, such complications are bound to arise when the life histories are worked out. It is advisable to apply the Principle of Priority to such cases.

In view of the foregoing comments it would be desirable for the Commission to reject Dr Baturó's application, and to declare valid the name *Gasterostomum* Siebold, 1848 (type species *Gasterostomum fimbriatum* Siebold, 1848) and the name *Bucephalus* Baer, 1827, rejecting the name *Rhipidocotyle* Diesing, 1858 as its synonym.

Additional references

- Hopkins, S.H. 1954. The American species of trematode confused with *Bucephalus* (*Bucephalopsis*) *haimeanus*. *Parasitology*, **44**: 353–370.
- Srivastava, C.B. & Chauhan, B.S. 1973. A review of Indian gasterostomes (Trematoda). *Records of the Zoological Survey of India*, **67**: 1–13.
- Stunkard, H.W. 1974. The life cycles, intermediate hosts and larval stages of *Rhipidocotyle transversale* Chandler, 1935 and *Rhipidocotyle lintoni* Hopkins, 1954: life cycles and systematics of bucephalid trematodes. *Biological Bulletin*, **150**: 294–317.
- Stunkard, H.W. 1976. The life cycles, intermediate hosts and larval stages of *Rhipidocotyle transversale* Chandler, 1935 and *Rhipidocotyle lintoni* Hopkins, 1954: life cycles and systematics of bucephalid trematodes. *Biological Bulletin*, **150**: 294–317.

(2) David I. Gibson

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I fully support Dr Baturó's application for the following reasons:

- (i) The work of Wallet & Lambert (1984) has confirmed Baturó's (1977) results concerning the identity of the cercaria which develops into adults currently recognised as *Bucephalus polymorphus*.
- (ii) The only major compendia of European freshwater fish parasites currently in use as identification manuals, those of Bykhovskaya-Pavlovskaya et al. (1962; translated into English, 1964) and Bauer (1987; translation now in preparation); both use the current conceptions of the adult forms of *Bucephalus polymorphus* and *Rhipidocotyle campanula* (= *illensis*). The former has been widely used and cited in the past, and the latter is being and will be widely used in the future.
- (iii) The names currently in use are now well accepted and regularly used in surveys, checklists and other studies of the parasites of freshwater fish parasites in Europe and the former Soviet Union (e.g. Osmanov, 1971; Kennedy, 1974; Ergens et al., 1975; Tell, 1980; Ivantsiv & Chernogorenko, 1984; Pojmanska, 1985; Walter, 1988). Between 1988 and 1990 I have found eight references referring to *Bucephalus polymorphus* and nine to *Rhipidocotyle campanula* or its synonym in European fishes.
- (iv) In relation to one of Dr Srivastava's comments, although *Gasterostomum* is not exactly a 'forgotten' name because its archaic vernacular 'gasterostome' is still in occasional usage, it is an 'unused' name, only rarely being referred to except in synonymy for at least the past 60 years.